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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/047,226	01/14/2002	Paul Brown	287122-00001-2	1895

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Arnold B. Silverman, Esquire
Eckert Seamans Cherin & Mellott, LLC
44th Floor
600 Grant Street
Pittsburgh, PA 15219

EXAMINER

KILKENNY, TODD J

ART UNIT	PAPER NUMBER
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1733

DATE MAILED: 07/02/2003

17

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/047,226

Applicant(s)

BROWN, PAUL

Examiner

Todd J. Kilkenney

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 April 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) 1-14 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 15-31 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 January 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

1. Claims 1 – 14 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in Paper No. 8.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
3. Claims 17 – 19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
4. Claim 17 recites the limitation "said overlay" in line 1. There is insufficient antecedent basis for this limitation in the claim. Claim 17 is directly dependent from independent claim 15, wherein only the slurry has been defined. The overlay is introduced in dependent claim 16.

Double Patenting

5. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

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Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

6. Claims 15 – 26 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 7 – 9, 15, 17, 20 of copending Application No. 10/044,660. Although the conflicting claims are not identical, they are not patentably distinct from each other because as further disclosed by the copending application (10/044,660) the overlay as required in claim 21, can be applied as a slurry (see claim 7 of copending application). That is, it would have been obvious to one of ordinary skill in the art at the time of the invention to create the overlay of copending application (10/044,660) as a slurry as defined in claim 15 of the present application in view of the copending application suggesting that said overlay can be applied to said concrete structure as a slurry (see copending application dependent claim 7), wherein the compounds as defined in claim 21 of the copending application, read on the compound as defined in claim 15 of the present application.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 27 – 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tatematsu et al (US 5,435,846) in view of Marazzani et al (US 6,402,990).

Tatematsu et al relates to cement additives for inhibiting concrete-deterioration and for inhibiting the corrosion of reinforcing steel caused by chloride ions contained in the concrete. As part of the cement additives, Tatematsu et al teach employing an “inorganic anion exchanger” which is capable of ion exchanging or adsorbing/retaining chloride ions in the concrete, wherein such adsorbing/retaining language is recognized by the examiner as being equivalent to applicant’s claim language of sequestering. In one application, Tatematsu et al suggest charging the cement additive into the a concrete body whose reinforcing steel is expected to be corroded by salt damage so as to prevent or inhibit corrosion thereof (Col. 1, lines 7 – 15; Col. 3, lines 21 – 32; Col. 5, lines 17 – 32). While teaching to charge a concrete body with the cement additive, Tatematsu et al fail to positively suggest charging said cement additive to the concrete body by creating a solution containing the cement additive and thereby introducing said solution to the concrete structure.

Marazzani et al teach a method of rehabilitating and/or protecting reinforced steel embedded in a hardened concrete structure with a corrosion-inhibitor applied to the surface of a concrete structure in solution form. Marazzani et al teach applying an aqueous corrosion-inhibiting composition to the surface of a hardened reinforced concrete structure, which thereafter penetrates the concrete structure inwardly to protect the reinforcing steel (Col. 11, line 13 – Col. 12, line 13).

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As to claims 27 and 28, it would have been obvious to one of ordinary skill in the art at the time of the invention to use the methodology of Marazzani et al (i.e. applying the corrosion inhibitor as an aqueous solution on top of an existing concrete structure, wherein the corrosion inhibitor solution penetrates the concrete structure inwardly to protect the reinforcing steel slurry containing additives) as the method of charging the cement additive of Tatematsu et al into a concrete as is generally suggested by Tatematsu et al in view of Marazzani et al, being directed to a method of protecting corrosion-inhibition of reinforcing steel embedded in hardened concrete bodies, providing a methodology of charging, which is advantageous in that it not labor-intensive, implies only moderate overall cost of rehabilitative treatment, implies an easy application and does not influence the aspect of the concrete surface (Marazzani et al, Col. 5, lines 21 – 35).

As to claims 28 and 29, it the examiners position that capillary suction would naturally occur into the concrete structure in view of Marazzani et al suggestion of penetration. Furthermore, effecting said introduction of said solution under pressure would have been obvious to one of ordinary skill in the art as such is considered a well known technique of aiding the penetration of liquids into solids as would have been readily appreciated by one of ordinary skill in the cement structure art.

As to claims 30 and 31, Tatematsu et al additional disclose “the anions, particularly NO_2^- , released from the anion exchanger in exchange reaction for Cl^- actively prevent or inhibit the corrosion of reinforcing steel” (Col. 5, lines 54 – 57).

Allowable Subject Matter

9. The following is a statement of reasons for the indication of allowable subject matter: The prior art of record fails to teach or otherwise render obvious a method of resisting corrosion of metals in a concrete structure comprising at least one compound capable of sequestering chloride ions selected from the group of compounds as defined in applicant's independent claim 15, which as amended excludes the cement additives of the reference to Tatematsu et al and the additional prior art of record.

Response to Arguments

10. Applicant's arguments filed 4-21-03 have been fully considered but they are not persuasive. In respect to independent claim 27, applicant argues the secondary reference to Marazzani et al (US 6,402,990) teaches a completely different category of corrosion-inhibiting compounds than those used in the present invention and therefore there is no teaching that the compounds of the present invention can be provided in solution on top of a concrete solution. However, the examiner notes that the primary reference to Tatematsu et al discloses the claimed compound of independent claim 27 and further suggests that said compound could be charged, alone or together with other additives, into a concrete body (Col. 5, lines 25 – 28). Furthermore, Tatematsu et al in teaching the additional application of adding the additive to a cement composition, suggests forming solutions of the additive prior to reacting with the cement mixture (see examples). Therefore, it is the examiner's position that the primary reference to Tatematsu et al teaches applicant's claimed (claim 27) corrosion inhibiting additive and teaches said additive can be charged into a concrete body. Furthermore, Tatematsu et

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al disclose said additive is initially produced in solution form. The secondary reference to Marazzani et al, being likewise directed to a method of charging a hardened concrete body with a corrosion-inhibitor, is evidence that charging can be accomplished by introducing inhibitors in solution form to the top of a hardened body, wherein said solution will be absorbed into the concrete body. It is the examiner's position that one of ordinary skill in the art would have been motivated to charge the solution inhibitor of Tatematsu et al into a concrete body, in the manner as suggested by Marazzani et al in view of the manufacturing benefits suggested by Marazzani et al as provided in the rejection above.

Conclusion

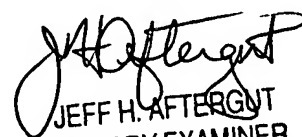
11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Todd J. Kilkenny** whose telephone number is **(703) 305-6386**. The examiner can normally be reached on Mon - Fri (9 - 5).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Ball can be reached on (703) 308-2058. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

TJK

TJK
June 29, 2003


JEFF H. AFTERGNT
PRIMARY EXAMINER
GROUP 1300